ABSTRACT OF THE DISCLOSURE

An apparatus and method for at-wavelength EUV mask-blank characterization for inspection of moderate and low spatial frequency coating uniformity using a synchrotron or other source of EUV light. The apparatus provides for rapid, non-destruction, non-contact, at-wavelength qualification of large mask areas, and can be self-calibrating or be calibrated to well-characterized reference samples. It can further check for spatial variation of mask reflectivity or for global differences among masks. The apparatus and method is particularly suited for inspection of coating uniformity and quality and can detect defects in the order of 50μm and above.